

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A device for controlling the brightness of an optical signal overlaid on a specimen image, ~~for example in a microscope,~~ having a main beam path (1, 2, 6), a main objective (12), a main light source (11), and a beam splitter (23) for reflecting image data into the main beam path (6), wherein the illumination for the reflected-in image (4) ~~can be~~ is generated on a transmitted-light basis, ~~in particular by means of a transmitted-light display (21),~~ selectably directly or indirectly by way of the main light source (11) and/or a second light source (18) controllable as a function of the main light source.

2. (Original) The device as defined in Claim 1, wherein the illumination for the reflected-in image can be generated selectably by the main light source (112) or by the light reflections of the main light source (2) from the specimen.

3. (Currently Amended) The device as defined in Claim 1, wherein ~~an optical prism~~ a deflection unit (17), ~~a mirror, or the like is~~ provided for switching between the main light source and reflected-in image light source.

4. (Currently Amended) The device as defined in Claim 1, wherein the beam path of the main light source (11) is divided by ~~means of~~ a beam splitter into a reflected-in image beam path (3) and a specimen illumination beam path (1).

5. (Cancel).

6. (Previously Amended) The device as defined in Claim 1, wherein the light wavelength of the reflected-in image light source (18) is adjustable.

7. (Currently Amended) The device as defined in Claim 1, wherein the brightness of the reflected-in image is controllable by ~~means of~~ a shutter (19) and/or a diaphragm.

8. (Cancel).

9. (Currently Amended) A device for controlling the brightness of an optical signal overlaid on a specimen image, having a main beam path (1, 2, 6), a main objective (12), a main light source (11), and a beam splitter (23) for reflecting image data into the main beam path (6), wherein the illumination for the reflected-in image (4) is generated on a transmitted-light basis, by ~~The device as defined in Claim 1, wherein a reflective display (32) or an incident-light display, for example a D-ILA display (32), is provided for the reflected-in image instead of a transmitted-light display (21).~~

10. (Currently Amended) The device as defined in Claim 1, wherein a ~~preferably~~ controllable portion of the reflected specimen light can be directed via a separate beam path (3) onto the transmitted-light display or incident-light display, and the specimen can be imaged thereon, ~~optionally in unsharp fashion.~~

11. (Currently Amended) The device as defined in Claim 10, wherein the specimen image on the display is adjustable; and/or a diffusion disk (25) ~~or the like~~ is arranged on the side of the transmitted-light display facing the specimen.

12. (Previously Amended) The device as defined in Claim 10, wherein an additional light source (18) can be superimposed into the display illumination beam path.

13. (Previously Added) A device for controlling the brightness of an optical signal overlaid on a specimen image, comprising:

a main light source configured to illuminate a specimen with a main light source illumination;

a main objective, configured to generate the specimen image in a viewer beam path; and

a beam splitter configured to reflect the optical signal into the viewer beam path,

wherein the optical signal is generated by a display, and an illumination of the display is selectable among the main light source illumination, a secondary light source illumination, and both, and

wherein the secondary light source illumination is adjustable as a function of the main light source illumination.

14. (Previously Added) The device as in claim 13, wherein the device is a microscope.

15. (Previously Added) The device as in claim 13, wherein the display is a transmitted-light display.

16. (Previously Added) The device as in claim 13, wherein the display is a reflective display.

17. (Previously Added) The device as in claim 13, wherein the display is a Direct-Drive Image Light AmplifierTM display.

18. (Previously Added) The device as in claim 13, wherein the illumination of the display by the main light source illumination is indirect, wherein the display is illuminated substantially by light reflections of the main light source illumination from the specimen.

19. (Cancel).

20. (Previously Added) The device as in claim 18, wherein the specimen image is imaged on the display via the indirect main light source illumination.

21. (Previously Added) The device as in claim 20, wherein the specimen image imaged on the display is adjustable.

22. (Previously Added) The device as in claim 20, further comprising a diffusion unit configured to reduce a sharpness of the specimen image imaged on the display.

23. (Previously Added) The device as in claim 13, wherein the illumination of the display is selectable among a direct main light source illumination and an indirect main light source illumination, and wherein, in the indirect main light source illumination, the display is illuminated substantially by light reflections of the main light source illumination from the specimen.

24. (Previously Added) The device as in claim 13, further comprising one of an optical prism and a mirror configured to select the illumination for the display from among the main light source illumination, the secondary light source illumination, and both.

25. (Previously Added) The device as in claim 13, further comprising a beam splitter configured to reflect a portion of the main light source illumination into a display illumination beam path.

26. (Previously Added) The device as in claim 13, wherein a brightness of the secondary light source illumination is electronically adjustable.

27. (Previously Added) The device as in claim 13, wherein a brightness of the secondary light source illumination is adjusted to substantially correspond to a brightness of the specimen image.

28. (Previously Added) The device as in claim 13, wherein a brightness of the secondary light source illumination is adjustable so that each pixel of the optical signal substantially corresponds to a brightness of a corresponding pixel of the specimen image.

29. (Previously Added) The device as in claim 13, wherein a brightness of the secondary light source illumination is adjustable in mechanically overwritable fashion.

30. (Previously Added) The device as in claim 13, wherein a brightness of the specimen image is adjustable by one of a shutter and a diaphragm.

31. (Previously Added) The device as in claim 13, wherein a light wavelength of the secondary light source illumination is adjustable.

32. (Previously Added) The device as in claim 13, wherein a light wavelength of the secondary light source illumination is adjusted to contrast with a light wavelength of the specimen image.

33. (Previously Added) The device as in claim 13, wherein a light wavelength of the secondary light source illumination is adjustable so that each pixel of the optical signal contrasts with a light wavelength of a corresponding pixel of the specimen image.

34. (Previously Added) The device as in claim 13, further comprising a secondary light source to generate the secondary light source illumination.

35. (Previously Added) The device as in claim 13, wherein the device is a surgical microscope.

36. (Previously Added) A device for controlling the brightness of an optical signal overlaid on a specimen image, comprising:

a main light source configured to illuminate a specimen with a main light source illumination;

a main objective, configured to generate the specimen image in a viewer beam path; and

a beam splitter configured to reflect the optical signal into the viewer beam path,

wherein the optical signal is generated by a display, and the main light source is configured to illuminate the display with an indirect main light source illumination, and

wherein the display is illuminated substantially by light reflections of the main light source illumination from the specimen.

37. (Currently Amended) ~~The device as in claim 36,~~ A device for controlling the brightness of an optical signal overlaid on a specimen image, comprising:

a main light source configured to illuminate a specimen with a main light source illumination;

a main objective, configured to generate the specimen image in a viewer beam path; and

a beam splitter configured to reflect the optical signal into the viewer beam path,

wherein the optical signal is generated by a display, and the main light source is configured to illuminate the display selectably by ~~wherein the illumination of the display is selectable among~~ a direct main light source illumination and the indirect main light source illumination.

38. (Currently Amended) ~~The device as in claim 36,~~ A device for controlling the brightness of an optical signal overlaid on a specimen image, comprising:

a main light source configured to illuminate a specimen with a main light source illumination;

a main objective, configured to generate the specimen image in a viewer beam path; and

a beam splitter configured to reflect the optical signal into the viewer beam path,

wherein the optical signal is generated by a display, and the display is illuminated selectably by ~~wherein the illumination of the display is selectable among~~ a main light source illumination and a secondary light source illumination.

39. (Previously Added) The device as in claim 38, wherein the secondary light source illumination is adjustable as a function of the main light source illumination.

40. (Previously Added) The device as in claim 36, further comprising a beam splitter configured to reflect a portion of the specimen image into a display illumination beam path.